WHAT IS CLAIMED

1. A system comprising:

a signal generating and receiving unit;

a cableless coupling assembly; and

an ultrasound transducing assembly coupled via the cableless coupling assembly to the signal generating and receiving unit.

2. A system comprising:

transducers having

acoustic transducing elements and

an acoustically isolating assembly; and

a signal generating and receiving unit coupled via the acoustically isolating assembly to the acoustic transducing elements.

3. The system of claim 2 wherein the acoustic transducing elements include at least an acoustically active material between two electrical contacts.

4. The system of claim 3 wherein the acoustic transducing elements include an acoustic matching assembly coupled to one of the two electrical contacts and an acoustic window coupled to the acoustic matching assembly.

5. The system of claim 2 wherein the signal generating and receiving unit includes a motherboard.

6. The system of claim 2 wherein a filler material is placed within kerfs formed by the acoustically isolating assembly.

7. The system of claim 2 wherein the acoustically isolating assembly includes posts of an electrically conductive and acoustically attenuating material.

8. The system of claim 7 wherein the posts are anisotropic conductors.

9. The system of claim 7 wherein the posts are isotropic conductors.

10. The system of claim 2 wherein the acoustically isolating assembly includes insulating posts having conductors for conducting electrical signals.

11. The system of claim 10 wherein the conductors are partially embedded within the posts.

12. The system of claim 10 wherein the conductors are attached to the outside of the posts.

13. The system of claim 10 wherein the conductors have an insulative backing that is coupled with the posts.

14. The system of claim 10 wherein the conductors are longer than and extend beyond the posts.

15. A system comprising:

circuitry having a signal generating and receiving unit;

acoustic transducing elements that include

an acoustically active material between two electrical contacts,

an acoustic matching assembly coupled to one of the two electrical contacts, and

an acoustic window coupled to the acoustic matching assembly;

a cableless coupling assembly coupled to the signal generating and receiving unit and the acoustic transducing elements, including at least

an acoustically isolating assembly having at least posts of an electrically conductive and acoustically attenuating material, isolating the acoustic transducing elements; and

a filler material placed within kerfs formed by the acoustically isolating assembly.

16. The system of claim 15 wherein the posts are anisotropic conductors.

17. The system of claim 15 wherein the posts are isotropic conductors.

18. The system of claim 15 wherein the acoustically isolating assembly includes conductors for conducting electrical signals coupled to the posts.

19. The system of claim 18 wherein the conductors are partially embedded within the posts.

20. The system of claim 18 further comprising an acoustical index matching element.

21. The system of claim 18 wherein the conductors are attached to the outside of the posts.

22. The system of claim 18 wherein the conductors have an insulative backing that is coupled with the posts.

23. The system of claim 18 wherein the conductors are longer than and extend beyond the posts.

24. A method of making an ultrasound system, comprising:

coupling an ultrasound transducing assembly via a cableless coupling to a signal generating and receiving unit.

25. A method comprising:

providing a signal generating and receiving unit;

coupling an acoustically isolating assembly to the signal generating and receiving unit; and

coupling acoustic transducing elements to the acoustically isolating assembly.

26. The system of claim 25 wherein coupling the acoustic transducing elements includes interposing an acoustically active material between two electrical contacts.

27. The method of claim 26 wherein coupling the acoustic transducing elements includes:

coupling an acoustic matching assembly to one of the two electrical contacts; and

coupling an acoustic window to the acoustic matching assembly.

28. The method of claim 25 wherein the signal generating and receiving unit includes a motherboard.

29. The method of claim 25 further comprises placing a filler material within kerfs formed by the acoustically isolating assembly.

30. The method of claim 25 wherein coupling the acoustically isolating assembly includes coupling insulating posts to conductors for conducting electrical signals.

31. The method of claim 30 wherein the conductors are longer than and extend beyond the posts.

32. The method of claim 25 wherein the acoustically isolating assembly includes posts of an electrically conductive and acoustically attenuating material.

33. The method of claim 32 wherein the posts are anisotropic conductors.

34. The method of claim 32 wherein the posts are isotropic conductors.

35. The method of claim 32 wherein coupling acoustically isolating assembly further includes

coupling conductors to an insulative backing; and

coupling the insulative backing to the posts.

36. A method comprising:

providing a generating and receiving unit;

providing acoustic transducing elements, including

interposing an acoustically active material between electrical contacts,

coupling an acoustic matching assembly to one of the electrical contacts, and

coupling an acoustic window to the acoustic matching assembly;

cablessly coupling an acoustically isolating assembly to the generating and receiving unit and the acoustic transducing elements, the acoustically isolating assembly including

an acoustically isolating structure having at least posts of an electrically conductive and acoustically attenuating material; and

placing a filler material within kerfs formed by the acoustically isolating structure.

37. The method of claim 36 wherein the posts are anisotropic conductors.

38. The method of claim 36 wherein the posts are isotropic conductors.

39. The method of claim 36 wherein the acoustically isolating assembly includes insulating posts having conductors for conducting electrical signals.

40. The method of claim 36 wherein the conductors are partially embedded within the posts.

41. The method of claim 36 wherein the conductors are attached to the outside of the posts.

42. The method of claim 36 wherein the conductors have an insulative backing that is coupled with the posts.

43. The method of claim 42 wherein the conductors are longer than and extend beyond the posts.

44. A method comprising:

transducing ultrasound via an ultrasound transducing assembly; and

communicating electrical signals between the ultrasound transducing assembly and a signal generating and receiving unit via a cableless coupling.

45. The method of claim 44 further comprising sending said ultrasound through an acoustic index matching element.

46. A method comprising:

communicating signals between a generating and receiving unit and acoustic transducing elements via an acoustically isolating assembly; and

transducing sound using the acoustic transducing elements.

47. A method comprising:

processing signals using a signal generating and receiving unit;

transducing ultrasound using an ultrasound transducing assembly having acoustic transducing elements that include

an acoustically active material between two electrodes,

an acoustic matching assembly coupled to one of the two electrodes, and

an acoustic window coupled to the acoustic matching assembly;

communicating signals between the ultrasound transducing assembly and the signal generating and receiving unit via a cableless coupling, the cableless coupling including

an acoustically isolating assembly having at least posts that are electrically conductive and acoustically isolating; and

acoustically isolating the acoustic transducing elements using

the acoustically isolating assembly, and

a filler material that is placed within kerfs formed by the acoustically isolating structure.

48. A system comprising:

a signal generating and receiving means;

an ultrasound transducing means;

a cablelesss coupling means for coupling the signal generating and receiving means to the ultrasound transducing means, including

a means for

acoustically isolating the ultrasound transducing means from the signal generating and receiving means, and

conducting electricity; and

an acoustic backing means for attenuating acoustic reflections.